REMARKS

The Office Action dated June 15, 2007, and the patent relied on therein have been carefully reviewed, and in view of the above changes and following remarks reconsideration and allowance of all the claims pending in the application are respectfully requested.

Claims 1-26 stand rejected. No claims have been amended or canceled. Claims 1-26 remain pending.

The Rejection Under 35 U.S.C. § 103(a) Over Talagala In View Of Zhang

Claims 1-26 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Talagala et al. (Talagala), U.S. Patent No. 7,017,107 B2, in view of Zhang et al. (Zhang), U.S. Patent No. 7,020,394 B2.

Applicants respectfully traverse this rejection. Applicants respectfully submit that the subject matter according to any of claims 1-26 is patentable over Talagala in view of Zhang because the applied patents are not properly combinable to form a basis for rejection of these claims, and the device and method resulting from the proffered combination are not the claimed subject matter.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (See, also, MPEP §§ 706.02(j) and 2143).

Regarding the first basic criterion for establishing a *prima facie* case of obviousness, Applicants respectfully submit that Talagala does not provide a suggestion or motivation to modify Talagala or to combine Talagala and Zhang as proffered by the Examiner. In the Office

Action dated June 15, 2007, the Examiner restates an argument submitted previously by Applicants that concludes with "[a]ccordingly, Talagala only discloses a system that reads from where the data is known to be, not a pathway determination system." (See Office Action dated June 15, 2007, page 4, lines 3-12.) In response to this argument, the Examiner introduces Zhang as if Zhang cures this particular deficiency of Talagala. It is also respectfully noted that the Examiner has not affirmatively asserted that Talagala provides a suggestion or motivation to modify Talagala or to combine Talagala and Zhang as proffered by the Examiner. Thus, the Examiner's statements and actions in the Office Action dated June 15, 2007, effectively admit that Talagala only discloses a system that reads from where the data is known to be, not a pathway determination system, and Talagala provides no suggestion or motivation to modify Talagala or to combine Talagala and Zhang as proffered by the Examiner.

Accordingly, if such a suggestion or motivation to modify Talagala or to combine Talagala with Zhang were to exist, it must be provided by Zhang or be in the knowledge generally available to one of ordinary skill in the art. Regarding the knowledge generally available to one of ordinary skill in the art, the Examiner has not specifically identified any such generally available knowledge.

Considering Zhang in greater detail for such a suggestion or motivation, the Examiner asserts that Zhang is "[i]n the same field of endeavor". (See Office Action dated June 15, 2007, page 4, line 17.) Applicants respectfully note that Zhang does not disclose a specific field for the disclosed invention, but the Title, Abstract and Summary portions of the Zhang disclosure plainly indicates that the Zhang system relates to a system and method for determining a shortest path between a source node and a destination node in an optical network of nodes interconnected with optical transmission links. Applicants also respectfully note that Talagala discloses that the field of invention for the Talagala system relates to error detection in storage systems. (See Talagala, column 1, lines 11-12.) Based on the respective disclosures of Zhang and Talagala, Applicants respectfully submit that the Examiner's assertion that Zhang is "[i]n the same field of endeavor" as Talagala is tenuous at best.

Even assuming that Talagala and Zhang are weakly in the same field of endeavor, Applicants respectfully submit that neither Talagala nor Zhang discloses or suggests such a combination. As previously demonstrated, the Examiner's statements and actions in the Office Action dated June 15, 2007, are an effective admission that Talagala only discloses a system that

reads from where the data is known to be, not a pathway determination system, and also that Talagala provides no suggestion or motivation to modify Talagala or to combine Talagala and Zhang as proffered by the Examiner. Regarding Zhang, Zhang provides no disclosure or suggestion that a system that detects errors in a storage system, such as the system disclosed by Talagala, would be needed or could benefit from a system and method for determining a shortest path between a source node and a destination node in an optical network of nodes interconnected with optical transmission links such as the system disclosed by Zhang. Moreover, the Examiner has not identified with any specificity where Zhang provides a suggestion or motivation to modify Talagala or to combine Talagala and Zhang as proffered by the Examiner.

Accordingly, by process of elimination, the Examiner's assertion that

it would have been obvious to one of ordinary skill in the networking art at the time of the invention was made to have incorporated Zhang's teaching of a method determining a particular pathway through the interconnection fabric, with the teachings of Talagala, for the purpose of 'ode [sic] greatly reduces the number of links in the wavelength graph and significantly increases computation efficiency" (see Office Action dated June 15, 2007, page 5, lines 1-6)

must implicitly be knowledge generally available to one of ordinary skill in the art that provides the suggestion or motivation to modify Talagala or to combine Talagala and Zhang as proffered by the Examiner. While Zhang purports to provide a network representation that includes an electronic node that greatly reduces the number of links in the wavelength graph and significantly increases the computational efficiency (see Zhang, Abstract of the Disclosure, lines 12-15), Applicants are at a loss as to why the Examiner's asserted suggestion or motivation would cause one of ordinary skill in the art to incorporate Zhang's teachings with the teachings of Talagala other than for the reason that through hindsight reconstruction based on the claimed subject matter of the current application the proverbial person of ordinary skill would arrive at a derivative of the Talagala system that would now include the concept of a pathway determination system. Accordingly, Applicants respectfully submit that it appears that the only reason that the Examiner has combined Zhang with Talagala is because of Applicants' disclosure provides such a suggestion or motivation.

Regarding the third basic criterion for establishing a *prima facie* case of obviousness, Applicants respectfully submit that even if the proffered combination of Talagala and Zhang is

formed, the resulting device and method are not the subject matter according to any of claims 1-26. In particular regarding claim 1, Applicants respectfully submit that neither Talagala nor Zhang disclose or suggest (1) the claimed sorter, (2) the claimed assigner, and (3) the claimed collector.

More specifically regarding claim 1, Applicants respectfully submit that neither Talagala nor Zhang disclose or suggest the claimed sorter that is capable of receiving a read request and separating the read request into an appropriate segment size for sending to the storage devices of the data storage system. As support for the Examiner's assertion that Talagala discloses the claimed sorter, the Examiner continues to cite column 10, lines 48-65, of Talagala and continues to subsequently urge to *"note that the scrubbing operation here is similar to a read request in which the array controller, in the case of the invention, the sorter, calculate the checksum for every unit of data refers to a segment of data size...."* (See Office Action dated June 15, 2007, page 3, lines 10-12, line 2; italics in original.)

Applicants still respectfully traverse the Examiner's subsequent urging that apparently tries to create a nexus between a Talagala scrubbing operation and a read request. Even assuming, arguendo, that such a nexus exists, it is respectfully noted that the Examiner's assertion and subsequent urging still do not identify with any specificity where Talagala discloses the concept of separating a read request into an appropriate segment size for sending to the storage devices of the data storage system. Further, the Examiner's assertion and subsequent urging do not identify with any specificity where Talagala discloses a sorter that is capable of receiving a read request and separating the read request into an appropriate segment size for sending to the storage devices of the data storage system. In this regard, Applicants respectfully request that in the next Office Action the Examiner provide specificity as to where Talagala discloses a sorter that is capable of receiving a read request and separating the read request into an appropriate segment size for sending to the storage devices of the data storage system. Applicants will consider an absence of such an explanation having specificity in the next Office Action to be a tacit admission by the Examiner that Talagala does not disclose or suggest the claimed sorter.

Further regarding the claimed sorter, the specific portion of Talagala that is still cited by the Examiner as providing support for the assertion that Talagala discloses the claimed sorter actually discloses in general terms that (1) a scrubbing operation can be performed independently

from any read requests for data; (2) that a scrubbing operation can be based on a checksum for every unit of data written to an array; (3) that the checksum can be cached and used for verifying data on subsequent reads; and (4) that an array controller may read all of the data to be scrubbed, calculate a new checksum for each unit of data, and compare the new checksum to an already-calculated checksum. (See Talagala, column 10, lines 48-65.) Thus, Applicants respectfully submit that the Examiner's continued assertion and subsequent urging regarding the claimed sorter are plainly without basis and, accordingly, Applicants respectfully submit that Talagala does not disclose or suggest the claimed sorter.

Regarding Zhang with respect to the claimed sorter, the Examiner has provided no explanation or indication that Zhang discloses or suggests that claimed sorter. As such, Applicants respectfully submit that Zhang plainly does not disclose or suggest the claimed sorter.

Further regarding claim 1, Applicants respectfully submit that neither Talagala nor Zhang disclose or suggest the claimed assigner that is capable of selecting a read permutation satisfying the received read request, such that the selected read permutation is based at least in part on a predetermined metric, and such that the assigner is capable of sending the selected read permutation to the storage devices of the storage system. As support for the Examiner's continued assertion that Talagala discloses the claimed assigner, the Examiner cites column 10, line 48, through column 11, line 8, and continues to subsequently urge that *"it is important to acknowledge the teaching of the pre-calculated checksum which in the case of the invention is the predetermined metric which is based on the read permutation or the reconstructed data checksum"*. (See Office Action dated June 15, 2007, page 3, lines 16-19; italics in original.)

Applicants still respectfully submit that this specific portion of Talagala cited by the Examiner actually discloses in general terms (1) that a scrubbing operation can be performed independently from any read requests for data; (2) that a scrubbing operation can be based on a checksum for every unit of data written to an array; (3) that the checksum can be cached and used for verifying data on subsequent reads; and (4) that an array controller may read all of the data to be scrubbed, calculate a new checksum for each unit of data, and compare the new checksum to an already-calculated checksum. (See Talagala, column 10, lines 48-65.) It is respectfully noted that the Examiner's assertion and subsequent urging still do not identify with any specificity where Talagala discloses the concept of a read permutation. In this regard, Applicants respectfully request that in the next Office Action the Examiner provide specificity as

to where Talagala discloses an assigner that is capable of selecting a read permutation satisfying the received read request, such that the selected read permutation is based at least in part on a predetermined metric, and such that the assigner is capable of sending the selected read permutation to the storage devices of the storage system. Applicants will consider an absence of an explanation having specificity in the next Office Action to be a tacit admission by the Examiner that Talagala does not disclose or suggest the claimed assigner.

Further regarding the claimed assigner, Applicants still respectfully submit that Talagala is silent regarding the concept of a read permutation because Talagala only discloses a system that reads data from where the data is known to be, not a pathway determination system. It is respectfully submitted that the portion of Talagala cited by the Examiner does not identify with any specificity where Talagala discloses the claimed assigner that is capable of selecting a read permutation satisfying the received read request, such that the selected read permutation is based at least in part on a predetermined metric, and such that the assigner is capable of sending the selected read permutation to the storage devices of the storage system. Moreover, as demonstrated above, the Examiner's statements in the Office Action dated June 15, 2007, at page 4, lines 3-21, effectively admit that Talagala only discloses a system that reads from where the data is known to be, not a pathway determination system. As such, it is plain that Talagala does not disclose or suggest the claimed assigner. Thus, Applicants respectfully submit that the Examiner's assertion relating to Talagala and subsequent urging are not the claimed assigner, and do not suggest the claimed assigner.

Regarding Zhang and the claimed assigner, Applicants respectfully submit that the Examiner has provided no details as to what particular portion of Zhang corresponds to the claimed assigner. While the Examiner's proffered combination of Talagala and Zhang results in a derivative of the Talagala system that includes the concept of a pathway determination system, Zhang is plainly silent regarding the claimed assigner that is capable of selecting a read permutation satisfying the received read request, such that the selected read permutation is based at least in part on a predetermined metric, and such that the assigner is capable of sending the selected read permutation to the storage devices of the storage system. At best, Zhang discloses a pathway determination system that determines the best pathway through a network, but is completely incapable of sending a selected read permutation to storage devices of a storage system. Applicants respectfully request that in the next Office Action the Examiner provide

specificity as to where Zhang discloses an assigner that is capable of selecting a read permutation satisfying the received read request, such that the selected read permutation is based at least in part on a predetermined metric, and such that the assigner is capable of sending the selected read permutation to the storage devices of the storage system. Applicants will consider an absence of an explanation having specificity in the next Office Action to be a tacit admission by the Examiner that Zhang does not disclose or suggest the claimed assigner.

Further still regarding claim 1, Applicants still respectfully submit that neither Talagala nor Zhang disclose or suggest the claimed collector that is capable of receiving the requested data from the N storage devices in response to the selected read permutation being sent to the storage devices. As support for the Examiner's assertion that Talagala discloses the claimed collector, the Examiner continues to cite column 4, lines 1-10, of Talagala and continues to subsequently urge that "*the disk controller plays the role of the collector, 'receiving the read data from within a data range from at least one of the disk drives*". (See Office Action dated June 15, 2007, page 4, lines 1-2; italics in original.)

Applicants respectfully submit that the similarities between the claimed collector and the Examiner's cite and subsequent urging, at best, still relates to the concept of a receiving requested data. Nevertheless, Applicants still respectfully submit that the Examiner's continued assertion and subsequent urging are tenuous because the Examiner has not shown that Talagala discloses or suggests, in particular, anything regarding a read permutation. Consequently, the Examiner still has not shown that Talagala discloses or suggests the claimed collector capable of receiving the requested data from the N storage devices in response to the selected read permutation being sent to the storage devices. Additionally, Applicants respectfully request that in the next Office Action the Examiner provide specificity as to where Talagala discloses or suggests a collector that is capable of receiving the requested data from the N storage devices in response to the selected read permutation being sent to the storage devices. Applicants will consider an absence of such an explanation having specificity in the next Office Action to be a tacit admission by the Examiner that Talagala does not disclose or suggest the claimed collector.

Regarding Zhang and the claimed collector, Applicants respectfully submit that the Examiner has provided no details as to what particular portion of Zhang corresponds to the claimed collector. Applicants respectfully request that in the next Office Action the Examiner provide specificity as to where Zhang discloses a collector that is capable of receiving the

requested data from the N storage devices in response to the selected read permutation being sent to the storage devices. Applicants will consider an absence of an explanation having specificity in the next Office Action to be a tacit admission by the Examiner that Zhang does not disclose or suggest the claimed assigner.

Thus, claim 1 is allowable over Talagala in view of Zhang. It follows that claims 2-13, which each incorporate the limitations of claim 1, are each allowable over Talagala in view of Zhang for at least the same reasons that claim 1 is considered allowable over Talagala in view of Zhang.

Regarding claim 14, Applicants respectfully submit that claim 14 is allowable over Talagala in view of Zhang for reasons that are similar to the reasons that claim 1 is considered allowable over Talagala in view of Zhang. More specifically, Applicants respectfully submit that neither Talagala nor Zhang disclose or suggest a method comprising separating a read request into an appropriate segment and size for sending the storage devices of the data storage system, selecting a read permutation from possible read permutations satisfying the received read request, and sending the claimed selected read permutation to the storage devices of the storage system.

Thus, claim 14 is allowable over Talagala in view of Zhang. It follows that claims 15-26, which each incorporate the limitations of claim 14, are each allowable over Talagala in view of Zhang for at least the same reasons that claim 14 is considered allowable over Talagala in view of Zhang.

Thus, Applicants respectfully submit that it is only by impermissible hindsight that the Examiner is able to reject claims 1-26 based on the proffered combination. Neither of the applied patents provides a proper suggestion for combination, and even if they did, the device and the method resulting from the proffered combination are simply not the claimed subject matter. It is only by the Applicants' disclosure and claimed subject matter that the Examiner can attempt to select purported features of Talagala and Zhang to make the rejection.

Consequently, Applicants respectfully request that the Examiner withdraw this rejection and allow claims 1-26.

Applicants note that additional patentable distinctions between Talagala and Zhang, and the rejected claims exist; however, the foregoing is believed sufficient to address the Examiner's rejections. Additionally, failure of Applicants to respond to a position taken by the Examiner is not an indication of acceptance or acquiescence of the Examiner's position. Instead, it is believed that the Examiner's positions are rendered moot by the foregoing and, therefore, it is believed not necessary to respond to every position taken by the Examiner with which Applicants do not agree.
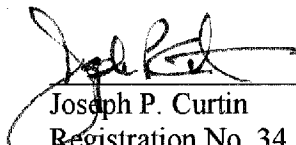
CONCLUSION

In view of the above amendments and arguments, it is urged that the present application is now in condition for allowance. Should the Examiner find that a telephonic or personal interview would expedite passage to issue of the present application, the Examiner is encouraged to contact the undersigned attorney at the telephone number indicated below.

It is requested that this application be passed to issue with claims 1-26.

Respectfully submitted,

Date: August 3, 2007

Joseph P. Curtin
Registration No. 34,571
1469 N.W. Morgan Lane
Portland, OR 97229-5291
(503) 296-8373
(503) 297-0452 (facsimile)